

IN THE CLAIMS

Please amend the claims as shown in the following detailed claim listing. The detailed claim listing is intended to reflect amendment of previously pending claims 1-3, 6-7 and 22; and the addition of new claims 25-35. The specific amendments to individual claims are detailed in the following detailed claim listing.

Sub. F1 1. (Currently Amended) A heat sink, comprising:
a plurality of laterally placed planar fins forming from a sheet, the plurality of laterally placed planar fins defining a folded fin structure having a top, a bottom, and a front, each fin having an aspect ratio of between about 20:1 and 30:1, and wherein the top of at least one fin of the folded fin structure comprises an arch, further wherein the top of the at least one fin includes a trimmed opening that extends along a portion of the length of the top of the at least one fin, wherein the trimmed opening is formed by removing the arch along the portion of the length of the top of the at least one fin;

61 a base attached to the bottom of the folded fin structure; and
a clip that attaches at least two clips to attach and thermally couples couple the folded fin structure to the base, the at least two clips not in contact with the top of the folded fin structure when in place.
Fig. 9
↑
non-elected

2. (Currently Amended) The heat sink of claim 1, further comprising a ~~first~~ fan attached to ~~the top of~~ the folded fin structure to introduce a convection medium.

3. (Currently Amended) The heat sink of claim 2 wherein the fan is a first fan attached to the top of the folded fin structure, further comprising a second fan attached to the front of the folded fin structure to introduce a convection medium in a direction different from the first fan.
Fig. 2 - corrected (12/18/24)

4. (Canceled)

Sub FI 5. (Previously Amended) The heat sink of claim 1, wherein the sheet is made from a material selected from a group consisting of copper, aluminum, a compound containing copper, a compound containing aluminum, or thermally conductive plastic.

6. (Currently Amended) The heat sink of claim 1, wherein the folded fin structure allows greater than fifty percent of the plurality of laterally placed planar fins to be receptive to the convection medium.

7. (Currently Amended) The heat sink of claim 1, wherein the convection medium is guided by the folded fin structure to flow parallel to each surface of each fin of the plurality of laterally placed planar fins and parallel to the base.

8. (Original) The heat sink of claim 1, wherein the base is solid.

9. (Previously Amended) The heat sink of claim 8, wherein the base is made from a material selected from a group consisting of copper, aluminum, a compound containing copper, a compound containing aluminum, or manufactured diamond.

10-21 (Canceled)

22. (Currently Amended) A heat sink, comprising:

a thermally conductive sheet creased in an accordion fold to form a plurality of surfaces defining a fin bundle having a top and a bottom, each fin having an aspect ratio of between about 20:1 and 30:1, wherein the top of the fin bundle is modified to create a plurality of trimmed openings that extend along a portion of the length of the top of the fin bundle, wherein the top of the fin bundle comprises a plurality of arches, ~~wherein~~ and the trimmed openings are formed by removing the plurality of arches along the portion of the length of the top, ~~and~~ wherein more than fifty percent of the plurality of surfaces are receptive to an introduced convection medium;

a fan for introducing the convection medium, the fan attached to the top of the fin bundle;

a base attached to the bottom of the fin bundle; and

Sub. F1) a clip ~~that attaches~~ to attach and thermally ~~couples~~ couple the base to the bottom of the fin bundle, the clip not in contact with the top of the fin bundle when in place.

23. (Previously Amended) The apparatus of claim 22, wherein the sheet is made from an alloy containing aluminum.

24. (Previously Amended) The apparatus of claim 22, wherein the base is made out of manufactured diamond.

Please add the following new claims:

25. (New) The heat sink of claim 2 wherein the fan is attached to the top of the folded fin structure.

26. (New) The heat sink of claim 2 wherein the fan is attached to the front of the folded fin structure.

27. (New) The heat sink of claim 22 wherein the fan guides the convection medium to flow substantially parallel to the fin bundle and substantially parallel to the base.

28. (New) A heat sink, comprising:

a thermally conductive sheet creased in an accordion fold to form a plurality of surfaces defining a fin bundle having a top and a bottom, each fin having an aspect ratio of between about 20:1 and 30:1, wherein the top of the fin bundle is modified to create a plurality of trimmed openings that extend along a portion of the length of the top of the fin bundle, wherein the top of the fin bundle comprises a plurality of arches, and the trimmed openings are formed by removing the plurality of arches along the portion of the length of the top, wherein more than fifty percent of the plurality of surfaces are receptive to an introduced convection medium;

a first fan for introducing the convection medium in a first direction, the fan attached to the top of the fin bundle;

Sub. F1 a second fan for introducing the convection medium in a second direction, the second fan attached to the front of the folded fin structure; and

{ 2 } a base attached to the bottom of the fin bundle.

29. (New) The heat sink of claim 28 wherein the first direction is substantially parallel to the fin bundle and the second direction is substantially parallel to the base.

30. (New) The heat sink of claim 28 wherein the fin bundle is attached to the base with bonding means.

31. (New) The heat sink of claim 30 wherein the bonding means is selected from the group consisting of brazing, epoxy and soldering.

32. (New) The heat sink of claim 28 further comprising at least one clip to attach and thermally couple the base to the bottom of the fin bundle.

33. (New) The heat sink of claim 32 comprising at least two clips, wherein the at least two clips are not in contact with the top of the fin bundle when in place.

34. (New) The heat sink of claim 33 wherein thermal gel is deposited between the bottom of the fin bundle and the base.

35. (New) The heat sink of claim 33 wherein thermal grease, epoxy, phase-changed material or thermal interface material is deposited between the bottom of the fin bundle and the base.